

AMENDMENTS TO THE CLAIMS:

1. (previously presented) A method for translation of mRNA to produce polypeptides, the method comprising:

synthesizing said polypeptides in a cell-free reaction mixture of greater than about 15 μ l volume, comprising an antifoam agent at a concentration of at least 0.00007%, and not more than 0.007% by weight, wherein the antifoam agent is other than a detergent.

2. (canceled)

3. (previously presented) The method of Claim 1 wherein said synthesizing also comprises transcription of mRNA from a DNA template.

4. (canceled)

5. (previously presented) The method of Claim 1, wherein said reaction mix comprises a volume of greater than 100 μ l.

6. (previously presented) The method of Claim 5, wherein said reaction has a yield that is at least about 90% of the yield in a comparable reaction of less than 15 μ l volume.

7-12. (canceled)

13. (previously presented) A method for translation of mRNA to produce polypeptides, the method comprising:

synthesizing said polypeptides in a cell free reaction mixture of greater than about 15 μ l volume, comprising:

a cell extract; a template for production of the mRNA and/or polypeptides; monomers for the mRNA and/or polypeptides to be synthesized; and such co-factors, enzymes and other reagents that are necessary for the synthesis; and an anti-foam agent at a concentration of at least 0.00007%, and not more than 0.007% by weight, wherein the antifoam agent is other than a detergent.

14-15. (canceled)

16. (previously presented) A reaction mixture for cell-free translation of mRNA to produce polypeptides, comprising:

a cell extract; mRNA; monomers for the polypeptide to be synthesized; and such co-factors, enzymes and other reagents that are necessary for the synthesis; and an anti-foam agent other than a detergent at a concentration of at least 0.00007%, and not more than 0.007% by weight.

17. (previously presented) The method of Claim 1 wherein oxidative phosphorylation is activated in the cell-free reaction mixture.

18. (previously presented) The method of Claim 1 wherein said reaction mixture comprises a volume of greater than 1000 μ l.

19. (previously presented) The method of Claim 1, wherein said synthesizing is performed in a reactor.

20. (previously presented). The method of Claim 19, wherein the reactor is a bubble reactor.

21. (canceled)

22. (previously presented) The method of Claim 1, wherein the antifoam agent is selected from alkyl polyoxyalkylene glycol ethers; siloxane polymers; and mixtures of organic non-silicone polypropylene based polyether dispersions.

23. (previously presented) The method of Claim 13, wherein the antifoam agent is selected from alkyl polyoxyalkylene glycol ethers; siloxane polymers; and mixtures of organic non-silicone polypropylene based polyether dispersions.

24. (previously presented) The reaction mixture of Claim 16, wherein the antifoam agent is selected from alkyl polyoxyalkylene glycol ethers; siloxane polymers; and mixtures of organic non-silicone polypropylene based polyether dispersions.